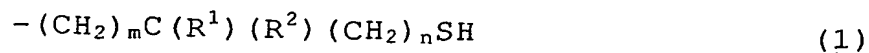


CLAIMS

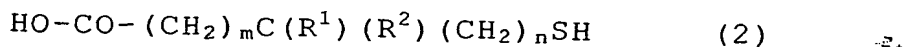
1. A photosensitive composition for color filter black matrix resists, comprising (A) a binder resin having a carboxyl group, (B) a compound having an ethylenically unsaturated bond, (C) a photopolymerizing initiator, (D) a thiol compound having two or more mercapto-group-containing groups in which carbon atom(s) at α -position and/or β -position with respect to the mercapto group have a substituent, and (E) an organic solvent.
2. The photosensitive composition for color filter black matrix resists according to claim 1, wherein at least one of the substituents in the thiol compound (D) is an alkyl group.
3. The photosensitive composition for color filter black matrix resists according to claim 2, wherein the alkyl group of the thiol compound (D) is a linear or branched alkyl group having 1 to 10 carbon atoms.
4. The photosensitive composition for color filter black matrix resists according to claim 1, wherein the mercapto-group-containing group of the thiol compound (D) is represented by the following formula (1)



(in the formula, R^1 and R^2 independently represent each a hydrogen atom or an alkyl group, at least one of R^1 and R^2 is an alkyl group, m is an integer of 0 or 1 to 2, and n is

0 or 1.)

5. The photosensitive composition for color filter black matrix resists according to any one of claims 1 to 4, wherein the thiol compound (D) is an ester of a mercapto group-containing carboxylic acid represented the following formula (2)



(in the formula, R^1 and R^2 independently represent each a hydrogen atom or an alkyl group, at least one of R^1 and R^2 is alkyl group, m is an integer of 0 or 1 to 2, and n is 0 or 1) with a multifunctional alcohol.

6. The photosensitive composition for color filter black matrix resists according to claim 5, wherein the multifunctional alcohol is one or more of compounds selected from a group consisting of alkylene glycol (provided that the alkylene group has 2 to 10 carbon atoms and may be branched), diethylene glycol, glycerol, dipropylene glycol, trimethylolpropane, pentaerythritol and dipentaerythritol.

7. The photosensitive composition for color filter black matrix resists according to claim 5, wherein the multifunctional alcohol is a high molecular polymer having a hydroxyl group.

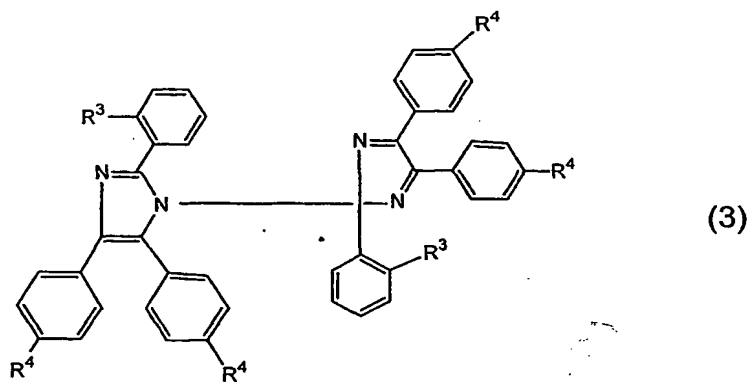
8. The photosensitive composition for color filter black matrix resists according to claim 1, wherein the binder resin having a carboxyl group (A) further has an ethylenically

unsaturated group.

9. The photosensitive composition for color filter black matrix resists according to claim 8, wherein the binder resin
5 having a carboxyl group (A) is an acrylic copolymer.

10. The photosensitive composition for color filter black matrix resists according to claim 1, wherein the
10 photopolymerization initiator (C) contains a hexaaryl biimidazole compound and/or an aminonacetophenone compound.

11. The photosensitive composition for color filter black matrix resists according to claim 10, wherein the hexaaryl biimidazole compound is represented by the following formula
15 (3)



(in the formula, R^3 represents a halogen atom, R^4 represents an alkyl group having 1 to 4 carbon atoms that may have a
20 substituent, or an alkoxy group that may have a substituent).

12. The photosensitive composition for color filter black matrix resists according to claim 1, wherein the

photopolymerization initiator (C) contains at least one compound selected from the group consisting of a benzophenone-based compound, a thioxanthone-based compound, and a ketocoumarin-based compound as a sensitizer.

5

13. The photosensitive composition for color filter black matrix resists according to claim 1, wherein respective components excluding the organic solvent (E) are contained in the following ratio based on the total amount of the components:

10

(A) a binder resin having a carboxyl group

30 to 70 mass%

(B) a compound having an ethylenically unsaturated compound

5 to 40 mass%

15

(C) a photopolymerization initiator 3 to 30 mass%

(D) a thiol compound having two or more

mercapto-group-containing group in which carbon atoms at α -position and/or β -position with respect to the mercapto group have a substituent

3 to 30 mass%

20

14. A color filter black matrix resist composition comprising the photosensitive composition for color filter black matrix resists according to any one of claims 1 to 13 and a black pigment (F).

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15. The color filter black matrix resist composition comprising the photosensitive composition according to claim 14, wherein the black pigment (F) contains carbon black.

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16. The color filter black matrix resist composition comprising the photosensitive composition according to claim

14, wherein respective components excluding the organic solvent (E) are contained in the following ratios based on the total amount of the components:

- (A) a binder resin having a carboxyl group
5 10 to 30 mass%
- (B) a compound having an ethylenically unsaturated compound
2 to 20 mass%
- ~~(C) a photopolymerization initiator 2 to 15 mass%~~
- (D) a thiol compound having two or more
10 mercapto-group-containing group in which carbon atoms at α -position and/or β -position with respect to the mercapto group have a substituent 2 to 15 mass%
- (F) a black pigment 40 to 70 mass%.